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AVERAGE WEEKLY EARNINGS, AUSTRALIA, SEPTEMBER QUARTER 1983 (PRELIMINARY)

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MAIN FEATURES

NOTE. It should be emphasised that figures of average weekly earnings are derived by dividing estimates of gross earnings by estimates of employment. The averages may be affected not only by changes in the level of earnings by employees but also by changes to the overall composition of the labour force such as variations in employment levels, occupation distribution and proportions of part-time, casual and junior employees. Statistics of average weekly earnings represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'.

Preliminary estimates of the average weekly earnings for September quarter 1983, in the pay period ending on or before 19 August, for all employees were \$354.60 for males, \$233.40 for females, and \$307.40 for persons; the respective changes from June quarter 1983 were 2.1 per cent, 0.7 per cent, and 1.5 per cent. The respective changes from September 1982 were 6.3 per cent, 5.2 per cent and 5.7 per cent.

The preliminary estimate of average weekly ordinary time earnings for full-time adults and the respective quarterly changes are shown below:

Full-time adults	Average weekly ordinary time earnings (\$)	Change from previous quarter (%)
Males	363.00	1.3
Females	289.00	0.8
Persons	339.80	1.0

EXPLANATORY NOTES

Introduction

This publication contains preliminary results for September quarter 1983 of a quarterly sample survey which was introduced in September quarter 1981. The survey is designed to obtain from employers, information on earnings in respect of a specified pay week each quarter, and replaces the average weekly earnings series based principally on information from payroll tax returns.

2. Background information on the reasons for the change from the payroll tax data to a direct collection is given in *Information Paper: Review of ABS Employment Statistics* (6239.0) published on 8 July 1981. A summary of the main differences in concepts, methods and coverage of the old and new earnings series is given in a further publication, *Information paper: Average Weekly Earnings—New Series to Replace Former Payroll Tax Based Series* (6336.0), issued 24 March 1982.

Scope of the survey

3. All wage and salary earners who received pay in respect of the reference period were represented in the survey, except:

- (a) members of the Australian permanent defence forces
- (b) employees of establishments primarily engaged in agriculture
- (c) employees in private households employing staff
- (d) employees on workers' compensation
- (e) employees based outside Australia
- (f) employees paid solely from commission without a retainer
- (g) self employed persons such as working proprietors of unincorporated businesses
- (h) subcontractors
- (i) owner/drivers.

4. Hospitals and religious and benevolent institutions were represented but any handicapped workers, who were engaged mainly for their own welfare and where records of payment were not readily available, were excluded.

Survey design

5. A sample of employers listed on the ABS Central Integrated Register was selected to ensure adequate State and industry representation. Industry was determined at the establishment level and all establishments of an enterprise within a State classified to a common industry were treated as a single composite unit. These industry units were then formed into categories or 'strata' according to their employment as recorded on the ABS Central Integrated Register, and a random sample was then selected within each category. Some 3,500 employers are included in the sample.

6. It was originally intended that the sample selected prior to the introduction of the survey in September 1981 would be used for an interim period of two years and that no revisions to take account of new businesses or those which had ceased operations would be made to the sample over this period. However, because of the potential distortions introduced into the estimation system by the heavy rate of business terminations which have occurred, the sample has now been revised to account for businesses which have ceased operations. As a result of these revisions, standard errors on movements for quarters subsequent to September 1982 are higher than those for previous periods.

7. As a result of the structuring of the sample by industry of establishment, some enterprises within a State may comprise more than one industry unit for survey purposes. In cases of this kind, separate returns have been sought for each of the industry units selected in the survey.

Reliability of the estimates

8. Since the estimates are based on information obtained from a sample of employers they are subject to sampling variability; that is, they may differ by chance from the figures that would have been produced if all employers had been included in the survey. The extent of the detail published has been determined after considering estimated measures of sampling variability.

9. One measure of the sampling variability is given by the *standard error*. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained, had all employers been included, and about nineteen chances in twenty that the difference will be less than two standard errors. Estimated standard errors are shown in Table 1 for September quarter estimates of the level of average weekly earnings and estimates of quarterly change.

10. An example of the use of a standard error for a September quarter estimate is as follows: Table 1 shows the estimated standard error for the September quarter estimate of average weekly total earnings for all employees in Australia as being \$5.00. Therefore there are about two chances in three that a complete collection would give a corresponding figure for September in the range \$302.40 to \$312.40 and about nineteen chances in twenty that it would be within the range \$297.40 to \$317.40.

11. A *quarterly change* estimate is obtained by expressing the differences between the estimated average weekly earnings for the June quarter and September quarter as a percentage of the June quarter estimate. An example of the use of a standard error for a quarterly change estimate is as follows: Table 1 shows the estimated standard error for the quarterly change estimate of average weekly total earnings for all employees in Australia as being \$1.10. The quarterly change estimate is \$4.40 (\$307.40 minus \$303.00). Therefore, there are about two chances in three that a complete collection would give a corresponding quarterly change figure within the range \$3.30 to \$5.50 and nineteen chances in twenty that it would be within the range \$2.20 to \$6.60.

12. The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by respondents. Inaccuracies of this kind are referred to as the *non-sampling error*, and they may occur in any enumeration, whether it be a full count or a sample. Efforts are made to reduce the non-sampling error by careful design of questionnaires and detailed checking of completed returns.

Comparability of results

13. The new series differs in several important ways from the payroll tax based series which it replaces. In particular, data on male and female, ordinary and overtime earnings are obtained directly from a sample survey of employers drawn from an ABS Central Integrated Register which is more complete than the coverage provided by employers subject to payroll tax. A more detailed description of the changes resulting from

the introduction of the new quarterly survey of employers is provided in the *Information Paper* (6336.0) referred to above.

14. Because of the differences in coverage, concepts and methods between the old and new series it is difficult to make direct comparisons. For users who wish to obtain movements in earnings for a period which takes in both the old and the new series, Table 2 has been included which shows quarter to quarter movement in the old and new series, linked to a common index base.

Definitions

15. *Reference period* refers to the last pay-period ending on or before a specified date. For September quarter the date was 19 August 1983. If the operations of the establishment(s) covered by the return were seriously curtailed by an industrial dispute, breakdown, fire, etc., during the reference period, particulars for the previous normal pay-period were obtained.

16. *Employees* comprise male and female wage and salary earners (as defined in paragraph 3) who received pay for the reference period.

17. *Full-time employees* are those who work the agreed or award hours for a full-time employee in their occupation and who received pay for any part of the reference period; if agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 30 hours or more a week. *Full-time* employees temporarily on short-time, or who began or ceased work during the reference period, are included. Some employees, who were paid for a weekly attendance of less than 30 hours (e.g. aircrews, teachers, university lecturers), are classified as full-time if they worked the normal scheduled hours for a full-time week.

18. *Adults* are employees 21 years of age or over and those employees who are under 21 years of age but are paid at the full adult rate for their occupation.

19. *Weekly total earnings* refers to earnings of employees in the reference period, before taxation and any other deductions, e.g. superannuation, board and lodging, have been made. Earnings comprise overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments, and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the reference period. Retrospective pay or pay in advance, annual leave loadings and other bonuses not related to the reference period are excluded.

20. *Weekly ordinary time earnings* refers to that part of *weekly total earnings* attributable to award, standard or agreed hours of work. Included in relation to these hours are shift allowances, penalty rates, commissions, bonuses and incentive payments, and one week's proportion of payments for annual and other leave taken during the reference period.

Related publications

21. Users may also wish to refer to the following publications which are available on request:

Average Weekly Earnings, Australia, June Quarter 1983 (6302.0)

Earnings and Hours of Employees, Australia, November 1982 (6304.0).

Earnings and Hours of Employees, Distribution and Composition, Australia, May 1981 (Preliminary) (6305.0), and the final publication (6306.0)—sample survey conducted annually from 1974 to 1981 inclusive.

Weekly Earnings of Employees (Distribution), Australia, August 1982 (Preliminary) (6309.0), and final publication (6310.0), containing results of household interview surveys conducted annually in August.

Income Distribution, Australia, 1978-79:

Individuals (Preliminary) (6501.0) and final (6502.0);

*Income Units (Preliminary) (6522.0) and final (6523.0);
Families (Preliminary) (6506.0)
Supplementary Tables (6504.0)*

Award Rates of Pay Indexes, Australia (6312.0)—issued monthly, new series replacing the Wage Rates Indexes.

22. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

Symbols and other usages

... not applicable
p preliminary

NOTE: The estimates of average weekly earnings are rounded to the nearest 10 cents.

R. J. CAMERON
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TABLE 1. AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA

Quarter	Survey reference date	MALES			FEMALES			PERSONS		
		Full-time adults		All males	Full-time adults		All females	Full-time adults		All employees
		Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings	Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings	Weekly ordinary time earnings	Weekly total earnings	Weekly total earnings
—dollars—										
1981—										
September	14 August	287.20	311.20	286.60	234.80	240.90	194.70	271.40	289.90	252.20
December	23 October	300.00	327.50	299.40	243.40	250.30	197.30	283.20	304.40	260.80
1982—										
March	19 February	314.10	341.30	316.00	250.50	257.70	207.10	294.30	315.70	274.60
June	21 May	324.40	352.10	326.00	261.50	268.20	215.50	305.10	326.30	283.90
September	20 August	338.80	363.20	333.70	270.60	276.50	221.80	317.60	336.30	290.80
December	19 November	351.10	375.70	341.50	281.60	287.20	223.60	330.20	348.90	296.30
1983—										
March	18 February	355.30	375.70	345.00	285.90	291.30	230.30	334.10	349.90	301.40
June	20 May	358.30	380.50	347.30	286.80	293.30	231.80	336.30	353.60	303.00
September p	19 August	363.00	386.30	354.60	289.00	295.20	233.40	339.80	357.70	307.40
—per cent—										
Quarterly change—										
1981—										
December		+4.5	+5.2	+4.5	+3.7	+3.9	+1.3	+4.3	+5.0	+3.4
1982—										
March		+4.7	+4.2	+5.5	+2.9	+3.0	+5.0	+3.9	+3.7	+5.3
June		+3.3	+3.2	+3.2	+4.4	+4.1	+4.1	+3.7	+3.4	+3.4
September		+4.4	+3.2	+2.4	+3.5	+3.1	+2.9	+4.1	+3.1	+2.4
December		+3.6	+3.4	+2.3	+4.1	+3.9	+0.8	+4.0	+3.7	+1.9
1983—										
March		+1.2	+0.0	+1.0	+1.5	+1.4	+3.0	+1.2	+0.3	+1.7
June		+0.8	+1.3	+0.7	+0.3	+0.7	+0.7	+0.7	+1.1	+0.5
September p		+1.3	+1.5	+2.1	+0.8	+0.6	+0.7	+1.0	+1.2	+1.5
—dollars—										
Standard errors(a)—										
1983—										
September	level p	5.20	7.40	7.10	1.60	1.50	1.80	4.00	5.50	5.00
	change p	1.20	1.50	1.60	0.90	0.90	1.00	0.90	1.10	1.10

(a) See paragraphs 9-11 of the Explanatory notes.

TABLE 2. AVERAGE WEEKLY EARNINGS AND INDEX NUMBERS OF EARNINGS:
OLD AND NEW SERIES (SEPTEMBER QUARTER 1981 = 100), AUSTRALIA

Quarter	Weekly total earnings			
	Per employed male unit		All male employees	
	Seasonally adjusted			
Old series			New series	
	\$	Index	\$	Index
1975—				
March	151.10	50.2	..	..
June	154.60	51.3	..	..
September	159.40	52.9	..	..
December	167.20	55.5	..	..
1976—				
March	170.10	56.5	..	..
June	179.40	59.6	..	..
September	184.60	61.3	..	..
December	188.10	62.5	..	..
1977—				
March	191.50	63.6	..	..
June	199.10	66.1	..	..
September	202.40	67.2	..	..
December	206.90	68.7	..	..
1978—				
March	211.40	70.2	..	..
June	216.00	71.7	..	..
September	220.90	73.4	..	..
December	222.20	73.8	..	..
1979—				
March	230.40	76.5	..	..
June	230.90	76.7	..	..
September	239.10	79.4	..	..
December	244.30	81.1	..	..
1980—				
March	250.90	83.3	..	..
June	258.60	85.9	..	..
September	270.20	89.7	..	..
December	278.10	92.4	..	..
1981—				
March	283.90	94.3	..	..
June	294.30	97.7	..	..
September	301.10	100.0	286.60	100.0
December	..	..	299.40	104.5
1982—				
March	..	..	316.00	110.3
June	..	..	326.00	113.7
September	..	..	333.70	116.4
December	..	..	341.50	119.2
1983—				
March	..	..	345.00	120.4
June	..	..	347.30	121.2
September p	..	..	354.60	123.7

A method of calculating an approximation of the New Series for quarters earlier than September 1981.

For reasons outlined both in the Explanatory notes (paragraph 13) and the more detailed exposition given in *Information Paper (6336.0)* the old and new series are not strictly comparable.

The following example, using estimates for Australia, is supplied to assist those users who need to calculate an approximate equivalent to the new series for quarters earlier than September 1981. Information is available on request to enable links to be made at State level.

Method of calculating the Average Weekly Earnings All Male Employees: example for June 1981

1. Average Weekly Earnings (\$) All Male Employees September 1981 (New Series) 286.60
2. Index numbers of old series: $\frac{\text{June 1981}}{\text{September 1981}}$ $\frac{97.7}{100}$
3. June 1981 equivalent of Average Weekly Earnings for All Male Employees. (1×2) 280.00

Because of the quite different conceptual and methodological bases of the two series and the fact that the link is only available for the September 1981 quarter, extreme care needs to be undertaken in interpreting the earnings figure so derived.